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BULLETIN

OF

National Association for the Study and Prevention of Tuberculosis

Vol. III. DECEMBER, 1916. No. 3

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Annual Meeting in Cincinnati

May 9, 10, and 11, 1917

The next annual meeting of The National Association for the Study and Prevention of Tuberculosis will be held in Cincinnati, May 9, 10 and 11, 1917. Members of the Association and other anti-tuberculosis workers are urged now to reserve these dates. Cincinnati offers many peculiar advantages for those interested in tuberculosis. It has a strong anti-tuberculosis league, a thoroughly efficient health department, a well-equipped hospital, besides open-air schools, dispensaries, and many other agencies doing tuberculosis work. In addition, Cincinnati has recently been selected as the city in which the National Social Unit Organization will seek to make a unique health and community demonstration during the next three years under the direction of Mr. and Mrs. Wilber C. Phillips. By next May this experiment will be well under way. Cincinnati also enjoys the distinction of being the only large city in which the United States Public Health Service has made a thorough tuberculosis survey.

The chairmen of the various sections for the annual meeting are: Dr. Roger S. Morris, Cincinnati, Clinical Section; Dr. Paul G. Woolley, Cincinnati, Pathological Section; Dr. Charles P. Emerson, Indianapolis, Advisory Council; and Frank H. Mann, New York, Sociological Section. Programs for each section will be in the hands of the respective chairmen. A preliminary announcement of the program will be published in the April *Bulletin*.

Have You Asked For Your Copy of Transactions?

Many members of the National Association have apparently overlooked the rule announced about two years ago that the publications of the Association would be sent free to them *only when they made special request*. On this account a number of members are wondering why they haven't received their copies of the Transactions, and other publications of the Association when they haven't asked for them.

All members of the Association are entitled to free copies of the following publications:

Transactions of the 12th Annual Meeting (1916). (Cloth-bound copies 50c. extra.)

Tuberculosis Directory (1916 edition).

Fresh Air and How to Use It.

Tuberculosis Hospital and Sanatorium Construction.

Effect of Tuberculosis Institutions on Value of Surrounding Property. (Pamphlet 102.)

Tuberculosis Legislation in the United States. (Pamphlet 104.)

Workingmen's Organizations in the Anti-Tuberculosis Campaign. (Pamphlet 105.)

Tuberculosis Dispensary Method and Procedure. (Pamphlet 107.)

Monthly Bulletin of the Association.

Journal of the Outdoor Life.

To members who have not received any of these publications, they will be sent on request to the executive office. Copies of Transactions for other than the current year will be furnished to members for 50c. each in paper or $1.00 in cloth. Attention is especially directed to the Transactions of the Twelfth Annual Meeting, and Pamphlet No. 107, "Tuberculosis Dispensary Method and Procedure," by F. Elisabeth Crowell, both of which are now available for distribution.

Attention is also directed to an error in the binding of the Transactions of the Twelfth Annual Meeting. The three X-Ray plates facing pages 150, 152 and 154, do not belong with paper of Dr. Baetjer, but with paper of Dr. Ritter, pages 161 sq.

Membership Campaign

More members are needed for The National Association for the Study and Prevention of Tuberculosis, if the program of work outlined for the next two years is to be carried out. The last year has been the most successful in the history of the Association. An unprecedented Red Cross Seal Sale in 1915 gave to the Association opportunities for new fields of organization, with the result that to-day every state in the Union may lay claim to some form of organized anti-tuberculosis work, and in all but seven states the work is on a full-time basis. The program for the next two years calls for standardization and intensive work with field secretaries, special studies, literature and correspondence. The growing campaign is taxing the limited resources of the Association to the utmost.

The immediate need, therefore, is more members to bring their influence and financial support to the help of the Association. Every present member of the Association can be a missionary to get more members. Application cards and literature will be sent on request either in quantity to members, or to those whom they designate. Circular letters for members to groups whom they may wish to solicit will be prepared free of charge, ready for signature, with postage affixed.

Members, Get Members.

BULLETIN OF
THE
NATIONAL ASSOCIATION FOR
THE STUDY AND PREVENTION
OF TUBERCULOSIS

Published Monthly
In the Interest of Workers Engaged in the
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THE NATIONAL ASSOCIATION FOR THE
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Vol. III. DECEMBER, 1916. No. 3.

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A Research Fund

Probably no other group appreciates more fully the importance of research as a foundation for propaganda than does the group that reads this BULLETIN. It costs money, however, to do research work. About a year ago a special committee of the National Association was appointed to stimulate work in tuberculosis research. This committee found on careful study of the field that there were a great many men who would be interested in taking up lines of pathological, bacteriological and chemical experimentation if they had the funds with which to do the work. Apparatus, animals, and other material necessary for this type of research are very expensive. If the men who are interested are willing to give weeks, months, and even years of painstaking, patient effort to find out some facts that will be of help to the man on the firing line, it seems as if those who are going to be benefited should help the plodders and diggers in the laboratory.

Dr. Edward R. Baldwin, Chairman of the Committee on Research of the National Association, will be glad to receive funds from readers of the BULLETIN or others to help stimulate tuberculosis research. Contributions in any amount may be sent to Dr. Baldwin.

Readers of the BULLETIN may help not only by giving money themselves, but by suggesting to Dr. Baldwin or to the Executive Office of the National Association the names of certain individuals in their community who might give money if they were approached with a concrete proposition. Many wealthy people will contribute if it is for a definite line of experiments. The names of a number of men and institutions who will do such experimental work are now available. Who can tell what the result of a contribution of five hundred or a thousand dollars may be? It may discover what scientists have been searching for for years, a vaccine or a serum that will aid in the treatment or prevention of tuberculosis. It may open up entirely new channels that will lead more effectually to the tracing of the causes and manifestations of tuberculosis in the human body. Possibilities of research are unlimited. It is hoped that readers of the BULLETIN will be enthused with these possibilities and will help the committee to stimulate this very important line of work.

Due to the difficulties involved in tuberculosis research and also to the fact that results are much harder to secure, the number of men who are entering this field of laboratory work is much smaller than it should be, and only by increased financial support can it be made reasonably adequate.

Enlarged Motion-Picture Service

The results of the first year's experiment in conducting a motion-picture service for tuberculosis films have convinced the National Association that this is a real opportunity to help both state and local anti-tuberculosis workers. The service will extend its scope somewhat during the year 1917.

In the first place, "The Great Truth," the new motion picture in two reels, produced by the Plimpton Epic Pictures for the National Association, will be added to the repertoire of the service. This print will be rented at the same rates as the other films after January first, namely, fifty cents per day per reel, or one dollar for two reels. Attention is directed to the reels given below.

The Executive Office is trying to find some arrangement whereby it can secure a motion-picture machine that is foolproof and easily portable, and which can be rented with the films as a part of this service, but it has not yet found a desirable outfit. Any suggestions along this line will be appreciated.

It is especially desirable that anti-tuberculosis associations shall take advantage of this service. The ordinary rental price of these motion pictures, when they can be secured at all, is two dollars per day. The price which the National Association charges just about pays expenses. Bookings for one day are not especially desirable, and it is requested that bookings be made for longer periods if possible.

A special circular, giving the rules of the service and a description of each of the pictures, may be had on request at the Executive Office. The following are the rules and regulations governing the service:

RULES

This service is not extended directly to motion-picture theatres, but is intended primarily for anti-tuberculosis associations, sanatoria, open-air schools and other anti-tuberculosis agencies. Other institutions and organizations, such as Y. M. C. A.'s, churches, etc., may avail themselves of the service, but owing to the limited number of films available, preference will be given to anti-tuberculosis agencies. The following rules and regulations will govern the service:

1. The National Association will have available for distribution in 1917 prints of these pictures: "Hope"; "The Price of Human Lives"; "The Temple of Moloch"; and "The Lone Game"—all of one reel each, and "The Great Truth" in two reels. All of these pictures are dramas, with plenty of action, heart interest, and education.

2. Pictures will be rented at the rate of 50c. per day per reel. Where pictures are rented for a period of 10 days or longer, a reduction of 10 per cent. from the regular price will be made. Special rates may be made for rentals of 30 days or longer.

3. The rental charge for pictures will be computed only for the days the pictures are in the possession of the renter. *If, however, the renter shall hold the pictures longer than the time allotted in advance, thereby deranging other bookings, a double charge of $1.00 per day per reel will be made for the extra time the pictures are held.*

4. The renter of the pictures agrees to pay transportation charges one way to the next point of delivery, except that renters of pictures for less than three days may be called upon to pay charges both ways. Films must be shipped prepaid by express in accordance with instructions of the National Association.

5. The National Association will furnish to each renter of films the necessary yellow labels required on all packages of this character by the Interstate Commerce Commission. Post-cards will also be furnished for notification, both of the National Association and the person to whom films are shipped, that they have gone forward at a specified time.

6. Persons receiving the films will be held responsible for any damage due to negligence while in their possession. Films must be shipped in the special metal containers which the National Association provides in accordance with regulations of the Interstate Commerce Commission. The users of pictures will be held responsible for loss of these boxes.

7. All persons who use these motion pictures are urgently requested to co-operate with the National Association in any way that will improve the service. If films are in poor condition and cannot be repaired locally, the National Association should be notified, so that they may be recalled to New York and overhauled. Inasmuch as these films are constantly being shipped from one point to another without being returned to the Executive Office, it is suggested that the local operator run off the reels before the regular performance, in order that slight defects may be discovered and repaired.

National Tuberculosis Hospital Association

Operating both under the name, "National Tuberculosis Hospital Association" and that of "Bureau of Investigations," Mr. S. Henry Rentfrew has for the last year or so been trying to collect money for a national negro sanatorium for tuberculosis, or a chain of state institutions or something of this character. Mr. Rentfrew's headquarters are at Washington, D. C. Since a number of inquiries have been received concerning him and his association, possibly some facts gleaned from the correspondence files of the National Association may be of interest.

According to information received from the State Board of Charities and Corrections of Virginia, Mr. Rentfrew, who is himself colored and hails from Virginia, was at one time employed as business manager of an institution for colored children in that state. After a short experience the directors felt compelled to dispense with his services. Later he launched a movement for the establishment of a negro hospital or hospitals, under the following full title, "National Tuberculosis Hospital Association (For the Emancipated Race) under Auspices Bureau of Investigations." According to the charter and other information available, The Bureau of Investigations is a commercial institution "under the management of practical and scientific men," which conducts "all kinds of investigations, commercial and otherwise. Special Service Rendered Investors."

In a letter to The National Association for the Study and Prevention of Tuberculosis, dated October 16, 1916, Mr. Rentfrew outlines his plans and purposes as follows:

"As our Association was organized and its plans based upon information obtained through an investigation of some duration, we are in a position not only to prosecute our undertaking, but at all times to gather such information in the field through our standardized commission which will no doubt prove a great asset in our hospital work.

"We shall confine our operations in establishing institutions to rural districts, endeavoring to establish such institutions that will enable the state to care for its own. We hope to be able to acquire in each case from three to five hundred acres of land for adequate farm and gardening facilities, where incipients may receive graduated exercise. In addition to one large plant for advanced patients, we will use the cottage system. These are our plans; however, nothing definite in this direction has been agreed upon. But it is an established fact that we will, in connection with our Sanatoria system, use the cottage and fresh-air camp.

"We will appreciate your Association's co-operation in our great undertaking. We have been promised the co-operation of the officials. Our plans and purposes have been submitted to our Congress friends. We are going slow, but leaving nothing undone. We are persuaded to believe that our operation, if fully realized, will deal a vital blow in the transmission and spread of the disease."

A week later the Metropolitan Life Insurance Company received a letter from a prominent citizen of Washington in which it was stated that Rentfrew was soliciting funds, claiming that this company was backing him and was going to give $500,000 to further his work. The Metropolitan Life Insurance Company never made any such statement to Rentfrew, and asked for an explanation. In reply Mr. Rentfrew denied making the statement, but said he had spoken of the interest of the Metropolitan Life Insurance Company.

In a letter to the Metropolitan Life Insurance Company, dated May 24, 1916, at the time the movement was just being started, he says:

"It is now a certainty that under the auspices of the Bureau of Investigations we will establish a chain of hospitals for the Negro race, especially through the Middle and Southern Atlantic States. Our investigations show that such institution is a necessity. We believe we can easily trace the disease almost to its origin in the Negro race. We have made some careful and scientific investigations along this line, and if our plans materialize in this direction, the work done will be foreign to what has been done. We find in the lower classes of the race the disease goes on and on without discovery. We can also trace the transmission of this disease to the white race through colored servants. We can only attribute such conditions to unsanitary and bad living conditions, as the disease is more prevalent in city life among the race.

"This is a big undertaking, but we feel, a feasible one, and we must solicit the moral and financial support of all, as the institution must be established by official appropriations and public subscription. We are now seeking the support of the United States Public Health Service Department. We have this matter now before them in detail, and have already adopted some of their suggestions, and feel confident of their support. We shall not only ask the Department for an appropriation, but also for the states where we locate an institution. We must work up enthusiasm along the line. We might add that our findings are, the local tubercular societies have accomplished but little."

A still different statement of the purposes of the Association are given in a letter to The National Association for the Study and Prevention of Tuberculosis under date of July 27, 1916, in the following words:

"Our purpose is to establish our institutions in various states as fast as possible. To equip each institution with dispensary, adequate farm and pasture land, stock and poultry. We propose to build the first institution in the state of Maryland. We are asking the United States Health Service this date to take the matter up with the state officials in an effort to secure their co-operation, which they have offered to do. Will be glad to hear from you at once."

In a letter to Dr. S. Adolphus Knopf, New York City, dated May 27, 1916, he gives another variant of his plan in these words:

"We find that also the disease goes on and on without discovery among the middle and poorer classes of the race. Therefore the Bureau of Investigations have adopted resolutions and plans to establish a group of institutions in central and south Atlantic states where most needed, and where the co-operation of such state can be secured in the maintenance of such an institution. This will modify the migration of the disease. The writer has had this matter before the U. S. P. H. Service, and at this writing feels confident of their endorsement, and this matter will also be taken up before the House of Representatives, and endeavors will be made to secure an appropriation. There will be nothing left undone along lines which mean materialization of our plans. Therefore we must seek the support of the best companies, especially Industrial. We have already taken it up with some of them. I might add, the writer is a Southern man, but has spent considerable time in the North, and we fully recognize the fact that we must go North for substantial help, and especially for the Negro race. Though a Southern man is the friend of the Negro, I might also state that agitation and local influence through the Southern states accomplish little. For instance, we have through the Southern states tubercular societies for the purpose of working up enthusiasm and educating the public along the lines of prevention. Very little have they accomplished, and we think the time is ripe for the real execution of thought. This is why we have undertaken this great project, and we believe it economy instead of establishing one national institution to establish state institutions instead, having adequate farm land attached thereto."

From a comparison of these various "purposes," it will be seen that Mr. Rentfrew is aiming to get money for some sort of negro tuberculosis work. The only names of other individuals who are apparently associated with Rentfrew appear on a copy of a charter dated June 20, 1916, and are Judge Lawrence Parry, President, and John B. Cochran, Treasurer. As to the feasibility of such a scheme or schemes as Mr. Rentfrew would seem to have in mind, readers of the *Bulletin* may judge for themselves.

Neither the Association with which Mr. Rentfrew is connected nor Mr. Rentfrew himself has the endorsement or support of The National Association for the Study and Prevention of Tuberculosis.

Query Column

This department of the Bulletin began with the June, 1916, issue. It is designed to be a monthly feature to answer your questions. Its success depends upon the use which you make of it. Therefore send in your questions. Read the other questions published and let the thousands of other anti-tuberculosis workers have the results of your experience.

Have you any suggestions with regard to the limits and topics suitable for the conduct of a prize-essay campaign?

It has often been found advisable to make the essays a part of the regular English work of the schools. In many schools teachers read articles to the pupils and then ask them to write essays on the subject. They are glad to use tuberculosis literature or a story such as "Danny's Christmas Seal."

Cash prizes are not necessary, although they are sometimes given. A reward that usually proves an incentive to an enthusiastic contest is to publish the names of the winners, and, if possible, their essays, in the newspapers.

Details of an interesting contest in Wayne County, N. Y., were recently received from Dr. Isaac Brewer, District Sanitary Supervisor of the State Department of Health. The following circular letter describes the contest:

A friend who is interested in the Public Health in Wayne County has placed in my hands $10 to be used for prizes for the best essays on tuberculosis, its cause and prevention with especial reference to Wayne County, written by a student in a high school or academy in Wayne County.

The first prize will be $5, the second $3, and the third $2. All essays receiving prizes to become the property of the donor.

The following are the rules of the competition:

1. Each essay must contain not less than 2,500 words, and not more than 4,000 words.

2. They must be written on one side of the paper and must be legible, and in the handwriting of the author.

3. The following points must be covered in the essays:

Prevalence of tuberculosis in the United States, prevalence in New York State, prevalence in Wayne County and in the community in which the author lives. The cause of tuberculosis, the method of its transmission, the prevention of tuberculosis. (a) What the State of New York is doing to prevent it. (b) What other counties are doing. (c) What Wayne County is doing. (d) What New York State Should Do. (e) What Wayne County Should Do.

4. The prizes will be awarded entirely upon the merits of the treatment of the subject as outlined in No. 3.

5. All essays must be in the hands of of the Principal of the school not later than Friday, April 14, 1916, and must be in my hands not later than Wednesday, April 20th.

6. Each essay must be signed by a non-de-plume and must not contain any marks or other characters that will identify the writer. Accompanying the essay, and attached to it must be an envelope marked on the outside with the non-de-plume and containing a paper with the name and address of the writer.

7. In order to avoid complications the non-de-plumes from the several schools shall be chosen from words beginning as follows: Macedon, A; North Rose, B, etc.

Sources of Information.

The Secretary of the National Association for the Study and Prevention of Tuberculosis, 105 East 22d Street, New York City.

The Executive Secretary, Tuberculosis Committee, State Charities Aid Association, 105 East 22d Street, New York City.

Dr. Hermann M. Biggs, Commissioner of State Department of Health, Albany, N. Y.

The Health Officer of your town or village.

Please inform me whether any of the children in your school desire to compete for these prizes.

Very truly,

Isaac Brewer,
Sanitary Supervisor.

What should a local tuberculosis circular contain in regard to death rate and educational material?

Abuse of statistics has given to the public generally a skepticism of death rates and similar figures which is very hard to overcome. In a popular circular or an appeal for funds, special care should be taken to present facts which can be verified. It is a dangerous thing to present statistics with a view to making comparisons or to drawing correlations between the statistical data and certain work accomplished in the anti-tuberculosis campaign. As a rule such comparisons are very difficult to demonstrate and correlations are almost impossible of proof. Statistics should be presented in outline and not in detail in an educational circular. It is much better to present them in a running paragraph than in the tabular form, unless the facts can be presented in a chart or a graph that is especially striking. Most mortality statistics and practically none of the morbidity statistics are given out by sex and age. Since it is impossible to get the real value of statistics without these two important factors, the anti-tuberculosis worker should make an analysis of them from the original death certificates wherever possible. In the *Journal of the Outdoor Life* for January will be published some statistical notes and suggestions that may be of value in this connection. An article in *The Trained Nurse and Hospital Review* (New York) for January and February will show how to make a county tuberculosis survey with limited resources, and will give some suggestion how to use original death certificates to get sex and age data.

The purpose of a circular or an appeal that includes statistics is to show the public that the organization for which support is asked is really doing something. Let the facts be presented in such a way that the busy man can read them at a glance. He doesn't care for details, but he wants facts that compel attention.

Red Cross Seal Reports

Agents for Red Cross Seals who have not worked out forms of report for their 1916 sale will do well to secure copies of a standard form from the National Association. State agents may secure quantities of this standard form for distribution to local agents, or local agents may have it on application. The purpose of a report on the Red Cross Seal Sale should be twofold, not only to tell how much money has been received and how many seals have been sold, but to give information as to how they were sold, and as to the methods which were most effective.

Local and state agents who expect to compete for the pennants and banners offered by the National Association must be particularly diligent in getting their reports in on time. It is desirable that these reports be returned as soon as possible. Furthermore, since the National Association and the American Red Cross have already begun preparations for the 1917 sale, the sooner reports on the sale of this year are in the better will be the arrangements for the coming year. Agents can be of great help by making prompt reports.

The Trudeau School of Tuberculosis

The attention of medical readers of the Bulletin is especially called to the second term of the Trudeau School of Tuberculosis, which opens at Saranac Lake on January 3, 1917. The course lasts for six weeks, closing February 10. The third course of the school will begin during the month of June. These courses are arranged for physicians who desire to study tuberculosis intensively, and to perfect themselves in diagnosis, including institutional methods. Both clinical and laboratory instructions are provided. The fee for the six weeks' instruction is one hundred dollars ($100), with $10 additional for incidentals. A limited number of fellowships will be granted each year to qualified workers, preferably those who are or may have been under treatment for tuberculosis. The aim will be to give preference to graduate students, but undergraduates and non-medical students may be eligible. A detailed prospectus and information about the school will be sent upon application to the Director, Dr. Edward R. Baldwin, Saranac Lake, New York.

Medical Notes, Abstracts and Reviews

The object of this monthly department of the "Bulletin" is to put physicians in easy touch with medical and scientific literature, both American and foreign, including magazine articles, books, reports, etc., that bear directly or indirectly upon the treatment and prevention of tuberculosis. This is not a department for news and editorial comment. Its function is rather that of a catalogue or a librarian. Any material for this department of the "Bulletin" should be sent to Dr. George Mannheimer, 41 West 51st Street, New York, who has been chosen medical editor.

Readers of the "Bulletin" who wish to have copies of the publication sent to physicians working in dispensaries, sanatoria, laboratories, and in other forms of tuberculosis activities, who are not now receiving it, should send in such lists of names to the National Association. The "Bulletin" is sent free to those who are engaged in anti-tuberculosis work.

Occupational Disease and Hygiene*

The last five years have brought an amazing awakening in all parts of the United States, especially to the true significance of diseases that are produced by occupation. While the more spectacular campaign for prevention of industrial accidents, with its "Safety First" slogan and its natural resultant of workmen's compensation laws, has been making militant progress. Urged on in part by this movement, physicians, health officers and social workers have been realizing more and more keenly that the subtle undermining processes of diseases due to certain industrial practices must be given attention. Voicing this realization comes a new monumental work, entitled, "Diseases of Occupation and Vocational Hygiene," edited by Dr. George M. Kober, of Washington, and Dr. William C. Hanson, of Belmont, Mass.

Dr. Kober, former president of The National Association for the Study and Prevention of Tuberculosis, is Professor of Hygiene at Georgetown University, and has been personally interested for years in the industrial hygiene movement, to which he has contributed much. Dr. Hanson was for several years connected with the Massachusetts State Board of Health, and in that capacity made a number of special studies relating to industry and disease. The other contributors to the book, all men and women of international prominence, are John B. Andrews, Irene Osgood Andrews, Dr. George L. Apfelbach, Dr. Bailey K. Ashford, Dr. John Clarence Blake, Dr. John T. Bowen, Dr. Louis Casamajor, C. H. Crownhart, Dr. Luigi Devoto, Dr. Seward Erdman, Dr. Langdon Frothingham, Dr. Alice Hamilton, Dr. R. Emery Hayhurst, Dr. Charles R. Henderson, Frederick L. Hoffman, Dr. Frederick S. Lee, Dr. Thomas S. Lee, Dr. Thomas M. Legge, Dr. Harry Linenthal, Owen R. Lovejoy, Dr. Sir Thomas Oliver, Dr. Thomas Ordway, Dr. Harry C. Solomon, Dr. E. Elmer Southard, Dr. Ludwig Teleky, Dr. John W. Trask, Dr. Ernest E. Tyzzer, George C. Whipple, and Dr. H. V. Wurdmann.

As to the aim and scope of the book, this is best explained for the most part in the language of the editors in the Foreword:

"The constant aim of the Editors has been the presentation of the basic data concerning the diseases of occupation in such a way as to render them available not only to physicians, but also to employers, employees, efficiency experts, public health officials and legislators; for it is only as a knowledge of the character, gravity, causes and prevention of these diseases is diffused that corrective and preventive action can be expected. The subject matter here presented is grouped, therefore, in three parts.

"Part I deals with the Specific and Systematic Diseases of Occupation. It also treats of Fatigue and the Neuroses. It is written by specialists of international reputation and adapted to the needs of medical and legal experts, medical examiners, insurance examiners, practising physicians, teachers, students, and others desiring accurate scientific information relating to the pathology, symptomatology and treatment of diseases of occupation."

Division I. of this part takes up specific occupational diseases, such as arsenic, lead and mercury poisoning the infectious diseases, such as Anthrax, and diseases due to compressed air and lack of proper atmospheric conditions.

"Part II deals with the Causation and Prevention of Occupational Diseases and Accidents. While it is also of interest to physicians, lawyers and efficiency experts, its chief interest should be with employers, employees, public health officials, nurses and social workers, legislators and others actively interested in the prevention of avoidable occupational hazards. This part of the book also contains a list of industrial poisons and of industries and processes in which poisoning may occur, and also tables of occupational mortality and morbidity statistics, arranged in alphabetical order for convenient reference." There are two main divisions in this part, one dealing with the Etiology and Prophylaxis of Occupational Diseases, and the other with Occupations Involving Exposure to Conditions Injurious to Health. In this latter division are taken up practically all of the health hazards that come from the workplace.

"Part III is intended to be of service to those who may be called upon to investigate in the shop, the factory, in the dispensary and hospital, the relations of occupation to disability and disease. This portion has been framed, too, in the hope that it may stimulate the teachers of the coming generation of physicians to impart to their pupils a better knowledge of occupational diseases and their prevention, which, after all, is of more economic importance than their cure." Division I of this part deals with the function of Clinics in the Prevention of Occupational Diseases, and more especially with the Milan Clinics, the latter contribution by the director of that clinic, Dr. Devoto. Division II takes up statistical studies relating to occupational disease, and Division III the more constructive part of the book, programs and methods of work in the control of occupational diseases.

As to an adequate appraisal of the value of such a book, it would be indeed difficult for a reviewer to express anything but an individual, isolated opinion. The book is really an encyclopedia on industrial diseases, and as such its value depends primarily upon the comprehensiveness and accuracy of the editors, and the needs of the individual who happens to be using it at the moment. The work is so complete in almost every detail that one marvels at the painstaking care of the editors. Its accuracy of detail is best vouched for by the reputations of the several contributors. It is, on the whole, a reference book which health officers, large employers of labor, physicians who deal with masses of workers, and social workers in fields related to industrial hygiene must have if they would be abreast of the times.

To any of these or to casual students in the field this work offers a unique opportunity for orientation in a difficult department of preventive medicine.—*P. P. J.*

* *Diseases of Occupation and Vocational Hygiene.* Edited by George M. Kober, M.D., and William C. Hanson, M.D., with 28 additional contributions XXII and 918 pp. Illustrated. P. Blakiston's Son & Company, Philadelpia, 1916. Price $8.00, postpaid. May be ordered through the JOURNAL OF THE OUTDOOR LIFE, 289 Fourth Avenue, New York.

Bacterial Cultures from Clinical Thermometers.—Cultures were taken from thermometers used by physicians in their daily practice. The thermometers were stirred in a broth medium, and after incubation the cultures were transferred to an agar plate. Total cultures taken, 82. Of these, 33 were sterile and 49 contained various organisms. Streptococci were present in 13. Of these, one was used in a case of erysipelas and five in scarlet fever. Staphylococcus albus and citreus were present in 13. Pneumococcus, in 1. The others contained Hay bacillus, large, spore-forming bacilli and moulds. Of six cultures taken from thermometers which were removed from the mouth and washed in running water, five gave various growths and one was sterile. Of six taken after the thermometers were washed in running water and rubbed with 95 per cent. alcohol, five were sterile. A thermometer case containing some antiseptic solution, like alcohol or formalin, in which the thermometer is placed after thorough washing, is an efficient method of preventing contamination and the carrying of infection from one patient to another.—*Report of eighty-two cultures taken from physicians' clinical thermometers, W. R. Ramsey and H. M. Schoberg, St. Paul, Med. Jour., July, 1916.*

Woman's Duty in Anti-Tb. Crusade.—Woman's duty in the combat of Tb. is primarily to acquire knowledge; secondarily, to use this knowledge for the prevention of the disease, and, thirdly, to render whatever personal service she can for both prevention and cure. She should not marry when actively tbc. or in danger of becoming so, and should not marry a tbc. man. If Tb. develops in either parent after marriage, prevention of conception will not only prevent the birth of a child who is destined to invalidism, but will also often save the life of the mother. If there are already children in the family they should be protected by scrupulous care and may remain healthy and strong. The mother should make an open-air

baby of all her children, feed them carefully and plentifully, keep their skin clean, following the warm bath for the babies with a rapid rubbing with her hands dipped in cold water. The only proper place to educate such children is in the open-air kindergarten and school. A child born with a tbc. predisposition should always sleep, if not in the open, at least in window-tent or in a bed moved near the open window. There must be no overdoing in physical or mental exercise. We should provide more playgrounds, small parks and breathing-places. Where land is expensive we can utilize the roofs. Multiply public baths and see that swimming is made part of the curriculum. We must also have hygienic factories, stores and offices, and we must prevent overwork and malnutrition; we must do away with dark bedrooms, congestion, unsanitary workshops and sweatshops, and child labor. Higher wages, better feeding and better housing will do away with much disease and misery. Woman can help toward the cure of Tb. by remembering that while the disease is curable, it is not curable in all stages. Let every mother remember the early symptoms: a long-continued cough, loss of flesh, a little fever in the afternoon, a little chill in the morning, easy tiring, frequent hoarseness, colds, increased irritability, little streaks of blood in the sputum. Local Tb. can be recognized by swelling of the glands or joints, lameness or difficulty in walking, running of ears, frequent nasal catarrhs, flabby skin, pain on pressure over enlarged joint, or general anemic appearance. Women of power, wealth and influence should also aid the community in which there are not sufficient sanatoria, dispensaries, preventoria and hospitals for tbc. adults and children to establish these institutions and see that they are well equipped, well managed, and the patients well taken care of.—*Woman's duty in the anti-tuberculosis crusade, S. Adolphus Knopf (New York), Med. Record, July 8, 1916.*

The Chemotherapy of Tb.—In Tb. the bacteria are largely located in points removed from the circulation by proliferating tissues. This avascularity has a large influence on the meeting of a drug and the germ and may make either for assistance or hindrance in chemotherapy. A chemical which is to destroy the tubercle bacillus, it would seem, should be one that would enter readily avascular tbc. lesions, and, if possible accumulate in such tissues more than in normal tissues. Guinea-pigs and rabbits with tbc. lesions were injected with various iodine compounds, and after varying periods the animals were bled to death and the blood and tissues analyzed for iodine. Tbc. lymph glands take up relatively more iodine from the blood than the liver, spleen and the lungs of the same animal. The caseous portion of the lymph node contained more iodine than the non-caseous portion of the gland. The same was found to be true of tbc. lesions of the eye as well as of experimentally produced necrotic tissues and exudates. Necrotic areas produced in muscle, which is not very permeable to iodine, contained as much iodine as the blood. Of normal organs and tissues, only the kidney contains as much iodine as the blood. This increased permeability to iodine of necrotic tissues does not depend on chemical affinity, for it is excreted from the necrotic tissues, the blood and the normal tissues *pari passu*. We are led to the conclusion that this supposed affinity is due to an increased permeability of diseased cells. Necrotic tissues, whether tbc. or not, behave like any non-living colloidal mass into which crystalloids diffuse readily and rapidly, while colloids enter very slowly or not at all. It was found that in cultures of tubercle bacilli there is a considerable amount of fatty material free between the bacteria which readily stains with fat-soluble dyes, but the dyes do not stain the bacilli readily, if at all. On the other hand, many dyes which are insoluble in fats, as fuchsin, methylene blue and eosin, stain the bacilli readily and intensely. Crushing the bacilli between cover slip and slide deprives them of their acid-fastness and also makes them permeable to fat-soluble dyes. Many dyes which penetrate the tubercles are well borne by the animals, and some also penetrate the bacillus and have a bactericidal action in vitro. Decided therapeutic effects have been obtained in lupus by the injection intravenously of gold and potassium cyanide. Gold salts have been found effective in dilutions of 1 : 100,000 up to 1 : 2,000,000. Encouraging results have also been obtained with gold cantharidin preparations. Cantharidin has been shown to produce severe reactions in any inflammatory focus.—*The Robert Koch Society for the Study of Tuberculosis, H. Gideon Wells (Chicago), The Chemotherapy of Tb., May 1, 1916.*

Partial Thoracoplasty for Pleural Adhesions.—The therapeutic result of an induced pneumothorax on a tbc. lung is the more favorable, the larger the gas bubble. The greatest obstacles are pleural adhesions which are usually primary, but may be secondarily due to the induction of the pneumothorax. It has been attempted to tear them by increasing the pressure. Local extrapleural pneumolys is or intrapleural section of adhesions have been done. Formerly, where a pneumothorax failed to collapse a lung, plastic operations were resorted to only after the pneumothorax had been allowed to disappear. In 1913 Sauerbrach and Elving recommended extrapleural thoracoplasty during the existence of the pneumothorax. Von Muralt describes in detail five cases treated in this manner. Formerly it frequently happened that if ribs were resected to collapse the adherent apex, sputum was aspirated into the healthy lower lobe of the same side, or the diseased portions, affected by the plastic, might simply be displaced into the neighboring soft parenchyma. By a pre-existing pneumothorax these complications are prevented. The operation is best done after the mediastinum has become rigid. Refillings have to be kept up after the plastic.—*Die Beeinflussung lokaler Pleura-adherenzen durch partielle Thorakoplastik, L. v. Muralt (Davos), Le Pneumothorax Thérapeutique, vol. i, 1915.*

Immunization Against Tb.—The tubercle bacillus as a parasite must have access to and egress from the organism attacked; it must not be readily destroyed, as it has no life history apart from the diseased organism. The highly resistant waxy capsule serves this protective purpose. Our body cells have considerable difficulty in disposing of such wax, yet it has been observed that the blood lymphocytes contain a ferment, lipase, which can digest this wax. This cell is, therefore, considered as the active antagonist of the tubercle bacillus in the body. The bacillus in passing through a mucous membrane is weakened, and in reaching a lymph node it is still further weakened. This stage may be a protection against future or further disease, although not a safe method, as witnessed by the large number of children who succumb to the disease. The higher immunity to Tb. displayed by dwellers at high altitudes is in part, at least, due to the changes in the blood at such altitude. The lymphocyte element of the blood increases in proportion to the increase in red blood cells, which may amount to an increase of 30 per cent. at such altitude as Colorado Springs (6,000 feet). Similarly, there is an increase in the blood platelets, an element which also takes a part in immunity processes. A vaccinating virus should be a virulent germ and should for a while grow in the tissues, if possible at the site of injection, thereby stimulating the production of antibodies by the host; but this growth of the virus should be invariably destroyed by the injected animal. No manner of injecting the tubercle bacillus alive has proven entirely successful. Experiments consisting of injections of living tubercle bacilli into guinea-pigs in increasing numbers, beginning with one, two, three, etc., up to the lethal number, failed to immunize the animals. The minimum lethal dose varied with different cultures of human tubercle bacilli, the addition of antagonistic elements to these cultures, such as lymphocytes, blood platelets, serum from immune animals, all proved unsuccessful and the animals injected developed the disease. The conclusion so far is that by the employment of a culture which is not too virulent, as tested by the minimum lethal dose, we can procure, by the inoculation of increasing numbers of tubercle bacilli, some degree of immunity to Tb.—*Present status of immunization against tuberculosis. G. B. Webb (Colorado Springs), The Robert Koch Soc. for the Study of Tb. (Chicago Tb. Institute), May 1, 1916.*

Contact Points between Tb. and Syphilis.—Of 471 cases having received the Wassermann test, 430 were negative, 10 were doubtful, 2 were unsatisfactory, and 29, or 6 per cent., were positive. Of the 430 negative cases 140 had incipient pulmonary Tb., 105 of these had repeated negative sputum, and 35 had positive sputum. Moderately advanced, 222, and of these 75 had negative sputum, and there were 147 instances where it was positive. The remaining 68 were far advanced; and of these 7 were negative, and 61 had positive sputum. The sputum was negative in 4, and positive in 2 of the doubtful cases in the incipient stage; 2 had negative sputum in the moderately advanced stage. There were no doubtful cases in the far-advanced stage of their pulmonary disease. Of 2 unsatisfactory cases, both of which were in the moderately advanced stage, one had a positive sputum and the other was negative. A positive Wassermann was obtained in 10 incipient cases, and of these cases 8 had negative and 2 positive sputum. In the moderately advanced stage 4 had negative and 11 positive sputum. In the far-advanced stage there were only 4 that gave a positive

Wassermann, and in each instance the sputum was positive. Lyon is firmly convinced that all patients who are suffering from diseases of the lungs should be given repeated Wassermann tests. — *Contact Points between Pulmonary Tuberculosis and Syphilis, J. A. Lyon, Rutland (Mass.), Boston Med. & Surg. Jour., Aug. 3, 1916.*

Tb. in the Nursling.—In this instalment of his study of the symptoms of Tb. in infants, Combe describes typical cases of lymph-borne generalized Tb. and the localized forms, and also those of blood-borne and bronchial origin. They include acute, subacute and chronic cheesy pneumonia and also the blood-borne types of miliary Tb., acute and chronic, localized or diffuse and surgical Tb. of various types. The clinical picture of each in infants is described with a few roentgenograms. The Tb. may develop so insidiously that when the symptoms of miliary Tb. or cheesy pneumonia develop they seem to appear like lightning from a clear sky. But necropsy always discloses the pre-existing glandular lesions. In older children the Tb. generally requires some intercurrent infectious disease, measles, whooping-cough or some physical or emotional stress to break down the gland barrier and permit the general invasion by the Tb. In older children, likewise, the invasion is not so general, as the defensive forces are better organized and the bacilli find a lodgment only at scattered points. He reiterates that in infants the generalized invasion is the rule, and it may occur by way of the lymph, the blood or the bronchi.—*Les formes envahissantes de la tuberculose dunourrisson, Combe, Le Nourrison, IV, No. 3, 1916.*

Treatment of Spinal Caries by Bone Transplants.—In the twenty-three cases reported by John, the following results were obtained: excellent in seven, moderately good in three, poor in one, indifferent as to operation in eight; one patient died as result of operation and three were not traced or too recent to consider. Of the six patients who died under treatment, one patient died of acute miliary Tb. in forty days after operation; one, of ether pneumonia, in forty hours after operation; three patients died of tbc. meningitis in seventeen days, two months and three months, respectively; and one case of secondary sinus infection twenty-six months after operation. John points out that the danger of arousing and disseminating a more or less latent infection by the trauma of the operation is more grave than has been generally conceded. Even in those cases in which the operation has been most successful in ankylosing the vertebræ, the good results in several instances have been only local, the disease soon appearing in a new focus. In other words, the disease is arrested locally, but not generally.—*Treatment of Caries of Spine by Bone Transplants; Report of Twenty-three Cases, R. L. John (Philadelphia), Amer. Jour. of Orthop. Surg., Aug. XVI, 1916.*

Atrophic Rhinitis and Tb.—Wingrave found that a certain acid-fast bacillus is present in every case of true ozena (atrophic rhinitis) which is never found in any allied conditions. It possesses a close morphologic and tinctorial resemblance to the tubercle bacillus. The histologic changes resemble those of a tbc. condition (lupus erythematosus). Animal inoculation produced lesions undistinguishable from Tb. But there are two postulates which have not been conformed with, *viz.*: (*a*) Demonstration of the organism in the diseased tissues, (*b*) Production of the disease in an inoculated animal. With regard to the first, it is not alone in this deficiency, since other diseases share the same defect. As to the second, it is almost an insuperable difficulty in a guinea-pig, not only for anatomic, but also for physiologic reasons. The disease in man is spread over a long period of years, and one can hardly expect a condition of such slow growth to be developed in the very short period of observation on the short life of the animal. So that some critical elasticity is demanded in this direction. Notwithstanding these weak links, Wingrave's investigation supports the view that atrophic rhinitis is a disease closely allied to Tb., and that its subjects are purveyors and distributors of an organism which is probably a variety of the tubercle bacillus. —*Atrophic Rhinitis (Ozena) and Tuberculosis, W. Wingrave, Journal of Laryng. Rhinol. and Otol., July, XXXI, 1916.*

Tb. of Spine.—A child suffering with Tb. of the spine, and while conscious and in full control of its voluntary muscles, is a very different object from the one which lies unconscious and relaxed under an anesthetic. The power of voluntary control and self-protection is entirely lost under an anesthetic. The spine sags and bends when the child is lifted, and torsion at one end of the spinal column is carried segment by segment the length of the spine, one vertebra rotating on the next one, to the limit of motion, and so on down. There is another factor to be considered. The intimate relationship of the great, the lesser and the smallest splanchnic nerves to the thoracic vertebræ is important. Stretching and tearing of these delicate nerve structures so close to the spinal axis may produce sudden and severe shock. Likewise compression or pinching of the nerve tissue may produce shock. Elmer cites cases and describes his method of procedure of avoiding such trauma. At the time of the operation the child is placed supine on the table, the front of the plaster jacket is then removed and the anesthetic started. A few minutes later the front of the jacket is replaced and held firmly in place by two assistants, while the child is turned over into the prone position. The back of the plaster jacket is removed, the operation performed on the spine, a light gauze dressing put on, and the back of the jacket with its cotton replaced, fastened firmly with girdles of adhesive plaster, and the child returned to its bed. In this way all twisting and unnecessary movements of the spine are avoided.—*Handling of Children with Tuberculosis of Spine while They Are Under Influence of Anesthetic, W. G. Elmer (Philadelphia), Annals of Surg., July, 1916.*

Tb. of Uterine Cervix.—Metzger's patient was a woman of 33 who for four years had had occasional vaginal hemorrhages outside of the menses, which were regular, and occasionally a greenish-yellow discharge. She had taken treatment, but no one knew what was the trouble, and there was no improvement. She had no pain, but tired easily and had grown very thin. The uterine cervix showed two small irregular ulcerations, with slightly raised edges, surrounded by sound mucosa. They bled at the slightest touch. There was no discharge from the uterus. The diagnosis of cancer was rendered improbable by the limited area covered by the ulcerations, although the affection was of several years' standing, and by the absence of fetid odor. Microscopic examination of an excised scrap confirmed the probable tbc. nature of the lesion, although no tubercle bacilli were found. As the woman seemed free from Tb. otherwise, her husband was examined and an old apical tbc. process was evident. He had a history of hemoptysis and expectoration, but had no cough at the time. The testicles showed no signs of Tb., but there had been a urethral discharge about four years ago for a time which finally subsided without treatment. This may have been a genital manifestation of his tbc. infection and have been the source of his wife's genital lesion. She has apparently entirely recovered since the amputation of the cervix last March, and has been gaining regularly over two pounds a month.—*Tuberculosis of Uterine Cervix, Probably Primary, M. Metzger, Arch. Mens. d'Obstetr. et de Gynec,, June, V, 1916.*

Tb. of Bones and Joints.—In the knee joint the disease may start in the femur, tibia, patella, synovial membrane or fibula. It is to be differentiated from hydrops articuli, Schlatter's disease, bleeder's knee and rheumatoid arthritis. In the ankle joint the sites of origin are the astragalus, tibia, synovial membrane or the fibula. Here it is to be differentiated from sprained ankle. In the tarsus any of the bones may be the primary seat, or it may be secondary to disease of the ankle joint. Flat foot is to be differentiated. The shoulder joint is rarely affected, and, if so, it is often accompanied by disease of the lung. Here, rheumatoid arthritis, subacromial and subdeltoid bursitis have to be differentiated. In the elbow joint it may start in the humerus, olecranon, head of the radius or in the synovial membrane. Any of the bones entering into the formation of the wrist joint may be affected. In the metacarpals and phalanges either the shaft or the joint is involved, the former being the more common and usually seen in young children. It is to be differentiated from syphilis of the phalanges, bone cyst and enchondroma. In the skull, syphilis and secondary malignant disease are sometimes difficult to differentiate from Tb. In the ribs it usually starts as a periostitis—rarely in the interior.—*Tuberculosis of the Bones and Joints, R. W. A. Salmond, Arch. of Radiol. Electrother., May, 1916.*

Prognosis of Tb. in Infants.—While the prognosis is always serious, yet Tb. in an infant is not inevitably fatal. The outcome depends on the age when infection occurred, the virulence of the infection and the number of opportunities for re-infection, also on the extension and clinical behavior of the lesion. If a series of repeated applications of Mantoux' intracutaneous tuberculin test every two weeks shows that the reaction is growing less each time until it finally dies out altogether, this indicates that the lesion is not pro-

ducing so much tuberculin as before or else that the body is producing enough antibodies to digest it. In either contingency, this Mantoux immunity may be accepted as a sign of good omen. Necropsies show, however, that the tbc. lesions in infants are always more extensive and more serious than would be surmised from the clinical examination. As long as the Tb. is restricted to the glands, the disease may progress very slowly or the child may recover. But when the gland barrier is broken down, the disease may run its course in a few weeks if the bronchi and lungs become involved, or cheesy pneumonia may drag along for months. There is also a very slow form of the disease, developing in the hilus or mesentery, *tabes hilaire* or *mésaraique*, in which the progressive cachexia may not prove fatal for two or three years. In the surgical forms the infection develops so slowly that antibodies are produced in progressive amounts, and this autotuberculinization may result in complete immunity and clinical recovery. He has had numbers of such cases. If this autotuberculinization has occurred before birth or through the milk, before infection becomes installed, the bacilli are unable to produce their usual lesions. They may live for years in apparently harmless symbiosis so long as this balance is not upset.—*The Prognosis of Tuberculosis in Infants, Combe, Le Nourrisson, July IV*, No. 4, 1916.

The Skin Tuberculin Test as a Basis for Prognosis in Young Infants.—The various statistics that have been published on the subject of the skin tuberculin test in children less than 2 years old have been obtained in a hospital or institutional environment, with few exceptions. This somewhat detracts from the reliability of the deductions, as conditions in families differ from those in institutions. Permin has been studying the skin tuberculin reaction in the young children in the families of persons who apply to the two Tb. dispensaries at Copenhagen. It is the rule there to examine all members of the families of applicants, and it has thus been possible to apply the Pirquet test to infants under the age of 2. Forty-six gave a positive response and have all been followed to date over a number of months. Some older member of the family had pronounced Tb. with opportunity for infecting the children, in all but three cases. This material is tabulated and analyzed, the conclusions being that only during the first year of life has the skin tuberculin reaction a particularly grave prognosis. Of the fifteen infants less than a year old, six died, but only two of the thirty-one between 1 and 2 years old. Many of the children who had been repeatedly and extensively exposed to infection seem to be thriving through quite a long period of observation. His statistics show further that the Tb. dispensaries, by training the tbc. in greater care to prevent infection of others, are doing a great work, the results of which are manifest in the clinical recovery of many children who otherwise would have succumbed to wholesale infection.—*The Skin Test in Prognosis of Tuberculosis in Children Under Two. (Om den prognostiske-Betydning af positiv Pirquets Reaktion hos Børn fra 0-2 Aar.) G. E. Permin, Hospitalstitende, July 19, 1916.*

Experimental Tbc. Meningitis.—Thirty-five rabbits were utilized by Austrian in making his observations. Twenty received inoculations of the bovine type of tubercle bacilli, and fifteen were injected with bacilli of the human type. The growth of a culture two weeks old was suspended in 0.85 per cent. salt solution. The resulting suspension was then diluted with salt solution to the approximate density of a 0.05 per cent. solution of lecithin in 0.85 per cent. salt solution. From 1.0 to 1.5 c.c. of such a suspension were slowly injected with very little pressure into the spinal canal, either through a needle inserted into the canal in the lower lumbar legion, or into the cranial cavity according to the procedure of Manwaring. These experiments demonstrated that the injection of tubercle bacilli into the spinal canal of rabbits caused the development of meningitis. The clinical syndrome produced was definite, and the symptoms were typically those of meningeal inflammation. The signs most constantly noted were dulness and coma, or restlessness, excitability and hyperesthesia to touch and light, anisocoria, paralyses, muscular hypertonicity, even opisthotonos. It is suggested that the ready production of meningitis in rabbits by the intraspinous injection of infectious material might be used to identify the nature of a meningeal infection in man. It would be a simple procedure to introduce into the spinal canal of a rabbit 1.0 to 2.0 c.c. of the spinal fluid of a patient thought to have tbc. meningitis, and in a few days examination of the rabbit's meninges might give evidence of the tbc. nature of the patient's disease.—*Experimental tuberculous meningitis, Chas. R. Austrian (Baltimore) Johns Hopkins Hosp. Bulletin, Aug., 1916.*

"Preventive Sun Cure."—Every day one or more groups of from twenty to thirty children gather at a certain spot in their quarter where a guide and assistant meet them and conduct the party to the banks of a lake not far from town. Here they spend the afternoon in games and gymnastic exercises, clothed only in bathing-trunks. The aim is to apply Rollier's system of heliotherapy as perfectly in the limited time afforded as is possible, and the work is all modeled on that in his institution. It was organized a year ago by Dr. L. Jeanneret for the more delicate schoolchildren of the city of Basel, and it has proved successful beyond all anticipations. He advertised for helpers in the papers, asking young men or young women to give up one afternoon in each two weeks to a group of frail children to help make them robust. Reflection from the lake doubles or triples the effect of the sunlight. There were only five days during the entire summer in which the trips could not be made on account of the weather. A group of children too small to take the half-hour walk were provided with a sanded and fenced space for the purpose in one of the public parks in town. A regular system was followed each day, the walk to the lake, then rest or quiet games, then gymnastics and games of all kinds. Efforts are made to train the children in good habits of breathing. The chest diameter of the two hundred children increased by 2.03 cm. on an average between July 14 and September 4, and the average increase in weight was 825 gm. Only four children failed to show this increase. The entire expense from May to October was about twenty-one dollars. When cold weather came, the children had their walk and the games, Saturdays, but they did not remove their clothing. Jeanneret urges that gymnastic exercises in schools should be taken with the trunk bare and in the open air when possible.—*La cure de soleil preventive, L. Jeanneret, Revue Med. de la Suisse Rom., April, XXXVI, 1916.*

Wasserman Reaction in Tb.—Of 251 unselected cases coming to the public tbc. clinic of Seattle 73 gave a positive reaction and 178 a negative one. There was no difference as to sex or nationality; the percentages of positive and negative being the same, 70 per cent. male and 30 per cent. female. Thirty of the cases were proven non-tbc. The average age was 33; the youngest, a girl of 16, with congenital lues, and the oldest a man of 70.—*The Wasserman Reaction in 251 Tuberculous Cases, W. R. Jones, Med. Record, Sept. 2, 1916.*

Tuberculin Therapy.—Our guiding principle in Tb. therapy is to stimulate sufficiently, if possible, but never to overstimulate the hypersensitive body cells. If our stimulus is insufficient we shall produce a state of allergy without accomplishing our object. This we may also do by too soon intermitting the treatment. We are treading on dangerous ground and must always be guided by the motto that haste makes waste. In many cases the diagnosis cannot be made without the subcutaneous use of tuberculin. For this we start, in cases of suspected pulmonary Tb., with 0.10 c.c. of No. IV dilution; we take the temperature every two hours in the twelve hours succeeding the injecton, and if there be no reaction in forty-eight hours, 0.50 c.c. of No. IV is given. If no reaction follows this, we give 0.10 c.c. of No. III, then 0.50 c.c. of No III, then 0.10 c.c. of No. II, then 0.50 c.c. of No. II and finally 1.10 c.c. of No. I. If, after these five injections, given every forty-eight hours, no reaction occurs, the patient is non-tuberculous. In the treatment with tuberculin, the selection of the appropriate dilution calls for the best judgment and clinical experience. Bonime protests against routine and rule of thumb methods and declines to treat a case where he cannot have reliable temperature records. Reactions must be avoided at any cost, and the immunizator should never forget that he may undo weeks of good work by a little carelessness. When the patient has been safely conducted through the various dilutions and has reached that stage where he will not react to 0.20 c.c. pure O. T., Bonime switches him onto B. E. This he considers imperative in joint cases and highly desirable in all cases of tbc. infection. The same decimal dilutions are made of B. E., but for patients having passed through the injections of O. T., only dilution No. I of B. E. is used. The method taught us by Bonime should give even better results than those obtained by Pottenger and in the clinics of England and Germany.—*Bonime's Modification of Koch's Treatment of Tuberculosis, Richard C. Newton (Montclair, N. J.), Med. Record, Aug. 19, 1916.*